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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,972	12/17/2001	Tushar Ramanlal Shah	RNI-001-5P	9470

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Legal Department  
Raza Microelectronics, Inc.  
18920 Forge Drive  
Cupertino, CA 95014

EXAMINER
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ROBERTS, BRIAN S

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/023,972

Applicant(s)

SHAH ET AL.

Examiner

Brian Roberts

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 1-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

- Claims 1-21 have been withdrawn.
- Claims 22-53 have been examined.

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims, drawn to 1-21, classified in class 370, subclass 401, "A bridge or gateway between networks".
  - II. Claims, drawn to 22-53, classified in class 370, subclass 437, "Adaptive selection of channel assignment technique".

Inventions of group 1 and of group 2 are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention of group 2 has separate utility such as adapting the transmission parameters from a mobile subscriber to a base station in a mobile communications system. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

2. During a telephone conversation with David Ashby on 10/03/2005 a provisional election was made with traverse to prosecute the invention of group 2, claims 22-53.

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Affirmation of this election must be made by applicant in replying to this Office action.

Claims 1-21 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

### ***Claim Objections***

3. Claims objected to because of the following informalities:

- Claim 22 and 45 does not have a "." period at the end of the sentence.
- In claim 35, "through" should be capitalized to remain consistent with the other claims and read --THROUGH--
- In claim 30 and 53, "receiving a plurality pf TDM data columns;" should read -- receiving a plurality of TDM data columns; --

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 31-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In reference to claim 31-35

Claim 31 recites, "receiving an incoming TDM data frame containing a *second* subset of TDM data columns" without ever reciting receiving an incoming TDM data

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frame containing a *first* subset of TDM data columns. Claims 32-35 are rejected because they are dependent on claim 31.

- In reference to claim 36

Claim 36 recites “a *third* subset of TDM data columns” without ever reciting a *first* subset of TDM data columns.

- In reference to claim 37-42

Claim 37 recites “ a *second* subset of high priority data packets” without ever reciting a first *subset* of high priority data packets. Claims 38-42 are rejected because they are dependent on claim 37.

- In reference to claim 43 and 44

Claim 43 recites “receiving an incoming TDM data frame containing a *second* subset of low priority data packets” without ever reciting receiving an incoming TDM data frame containing a *first* subset of low priority data packets. Claim 44 is rejected because it is dependent on claim 43.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 22-23, 25-29, 45-46 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Dirschedl et al. (US 6262994).

- In reference to claim 22, 45

In the Figure, Dirschedl et al. teaches a system and method of optimization of data transmission:

- Adapting packet size, modulation, code rate and transmission power level in response to variable environmental conditions.
- Determining the available bandwidth based on the transmission quality where the transmission quality includes the error rate. (column 2-3 lines 59-8)
- Adjusting the packet size based on the error rate (column 3 lines 1-8)
- Forming packet having a variable number of frames where the data part (payload) is between 4 to 250 bytes and where the payload is smaller than or equal to the available payload size. (column 2 lines 29-40)

- In reference to claim 23, 46

Dirschedl et al. further teaches adapting a transmission power level of the first node. (column 2 lines 55-59)

- In reference to claim 25

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Dirschedl et al. further teaches adapting a modulation level. (column 2 lines 41-49)

- In reference to claim 26

Dirschedl et al. further teaches receiving a transmission quality (signal quality) value from a second network node. (Figure)

- In reference to claim 27-28

Dirschedl et al. further teaches decreasing/increasing the modulation level depending on whether the signal quality value is less/greater than a desired signal quality value. (column 2 lines 41-49)

- In reference to claim 29, 52

Dirschedl et al. further teaches adapting the code rate in the first network node. (column 2 lines 50-54)

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 24 and 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dirschedl et al. (US 6262994) in view of Bark et al. (US 6628956).

- In reference to claim 24, 47

Dirschedl et al. teaches a system and method that covers substantially all limitations of the parent claim. Dirschedl et al. further teaches a first network node receiving a received signal quality measurement from a second network node.

(FIGURE)

Dirschedl et al. does not explicitly teach receiving a received power error value from a second network node.

Bark et al. teaches receiving a power error value from a second node. (abstract)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Dirschedl et al. to include receiving a received power error value as taught by Bark et al. because it would allow the transmitter of the Figure to adjust the transmission power level according to the received power error value to minimize the error rate.

- In reference to claim 48

The combination of Dirschedl et al. and Bark et al. teach a system and method that covers substantially all limitations of the parent claim. Dirschedl et al. further teaches adapting a modulation level. (column 2 lines 41-49)

- In reference to claim 49



The combination of Dirschedl et al. and Bark et al. teach a system and method that covers substantially all limitations of the parent claim. Dirschedl et al. further teaches receiving a signal quality value from a second network node. (FIGURE)

- In reference to claim 50-51

The combination of Dirschedl et al. and Bark et al. teach a system and method that covers substantially all limitations of the parent claim. Dirschedl et al. further teaches decreasing/increasing the modulation level depending on whether the signal quality value is less/greater than a desired signal quality value. (column 2 lines 41-49)

10. Claims 30-32, 37-38, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dirschedl et al. (US 6262994) in view of Roy et al. (US 6631130)

- In reference to claim 30 and 53

Dirschedl et al. teaches a system and method that covers substantially all limitations of the parent claim.

Dirschedl et al. does not explicitly teach receiving TDM data and packet data of varying priority levels at a node and placing the data in a payload according to the priority level.

Roy et al. teaches receiving a plurality of TDM, ATM and packet data. The TDM frames are SONET frames that inherently contain data columns. The data columns contain packets that can have varying priority levels such as high or low. The ATM data inherently contain an associated priority including high and low. The bandwidth is

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arbitrated among the ATM and Packet connections while maintaining the TDM timing.

(abstract; column 8 lines 23-42)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Dirschedl et al. to include placing the TDM and packet data of varying priority levels in a payload for transmission as taught by Roy et al. because it would allow the transmission of ATM, packet and TDM data while maintaining the TDM timing and allow for arbitration among the ATM and packet data for the remaining available bandwidth according to the priority levels of the data.

- In reference to claim 31-32 and 37-38, as best understood

Dirschedl et al. teaches a system and method that covers substantially all limitations of the parent claim.

Dirschedl et al. does not explicitly teach receiving a plurality of TDM data columns in TDM data frame from a TDM user interface or a plurality of high priority data packets from a packet interface.

In Figures 1A and 1B, Roy et al. teaches receiving an incoming data frame that inherently contains a second and third subset of TDM data from a TDM user interface and receiving a plurality of high priority of data packets from a packet interface. TDM data frames can contain packets of varying priority level.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Dirschedl et al. to include receiving TDM data columns containing packets of varying priority levels and receiving a plurality

of data packets with varying priorities as taught by Roy et al. because it would allow the transmission of ATM, packet and TDM data while maintaining the TDM timing and allow for arbitration among the ATM and packet data for the remaining available bandwidth according to the priority levels of the data.

11. Claims 33-36, 39-42 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dirschedl et al. (US 6262994) in view of Roy et al. (US 6631130), as applied to the parent claim, and further in view of Chang (US 5867502).

- In reference to claim 33-36, 39-42 and 43-44, as best understood

The combination of Dirschedl et al. and Roy et al. teach a system and method that covers substantially all limitations of the parent claim.

The combination of Dirschedl et al. and Roy et al. does not teach dropping or through data columns in a TDM network.

Chang teaches that in SONET, data columns are transmitted through the network until the columns reach a destination node. Data columns that are at the destination node are commonly referred to as DROP data columns while data columns that have yet to reach their destination node are transmitted through the node and are commonly referred to as THROUGH data columns. Packet data inherently originates from a packet user interface and TDM data inherently originates from a TDM user interface. Data received at a node from a TDM user interface for transmission through the SONET is commonly referred to as ADD data columns. (abstract)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of the combination of Dirschedl et al. and Roy et al. to include sorting between DROP and THROUGH data as taught by Chang because it would allow data in a SONET ring that is not to be transmitted over the wireless link to be passed through while allowing the first node to separate data that is suppose to be transmitted over the wireless link.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Yoshida (US 6452964) teaches an adaptive modulation method.
- Castellano (US 6674750) teaches an apparatus and method for communicating time-division multiplexed data and packet data on a shared bus.
- Pasternak et al. (US 5936949) teaches a wireless ATM metropolitan area network.
- Fitzgerald (US 6421720) teaches a codec-independent technique for modulating bandwidth in a packet network.
- Edwards et al. (US 2002/00286679) teaches data transmission based on available wireless bandwidth.
- Rathonyi et al. (US 6359877) teaches a method of adapting a size of a packet according to the transmission rate.

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- Gulliford et al. (US 6366584) teaches nodes linked to together to form a communications ring using RF or wireless SONET.
- O'Connor (US 20020085543) teaches a SONET ADD/DROP multiplexer with packet over SONET capability.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BSR  
10/05/205

  
JOHN PEZZULLO  
PRIMARY EXAMINER